

C L A I M S

1. A medical guide wire which comprises a guide wire body to be passed through a channel of an endoscope, the guide wire body serving to guide an appliance to be inserted into the human body in an insertion operation, the medical guide wire comprising:

a fixing portion formed of a substantially wire-shaped retainer having one end coupled to the distal end portion side of said guide wire body and the other end extending to the proximal end portion side of said guide wire body and used to fix the position of said medical guide wire by means of said retainer lest the position of said medical guide wire relative to said endoscope change.

2. A medical guide wire according to claim 1, wherein said retainer is formed of a retaining wire of a resin, a metal, or a metal coated with a resin having a stiffness high enough not to be intertwined with said guide wire.

3. A medical guide wire which comprises a guide wire body to be passed through a channel of an endoscope, the guide wire body serving to guide an appliance to be inserted into the human body in an insertion operation, the medical guide wire comprising:

a retaining wire located parallel to said guide wire body, one end of the retaining wire being

connected to the distal end of said guide wire body or a portion near the distal end and the other end extending close to the hand-side end of said guide wire body.

5 4. A medical guide wire according to claim 3, wherein said retaining wire has a separable junction with said guide wire body.

10 5. A medical guide wire according to claim 4, wherein said guide wire body is provided with a soft coupling member of an elastic material formed on the distal end portion thereof, the distal end portion of said retaining wire being removably coupled to the coupling member.

15 6. A medical guide wire according to claim 3, wherein the respective sectional shapes of said guide wire body and said retaining wire form a substantially circular shape when the sectional shapes are joined together as the two are arranged side by side.

20 7. A medical guide wire according to claim 6, wherein said retaining wire is an arcuate wire having a substantially crescent sectional shape.

 8. A medical guide wire according to claim 3, wherein said guide wire body and the retaining wire are provided with insulating coating layers, individually.

25 9. A medical guide wire according to claim 3, wherein said retaining wire is a ribbon-shaped wire having a substantially flat sectional shape.

10. A medical guide wire according to claim 3, wherein the proximal end portion of said retaining wire is provided with a retaining portion having a diameter larger than that of any other portion.

5 11. A medical guide wire according to claim 3, wherein the proximal end portion of said retaining wire is held by means of a wire fixing portion attached to said endoscope.

10 12. A medical guide wire according to claim 3, wherein the proximal end portion of said retaining wire is held by means of a wire fixing portion attached to an operating section of said endoscope.

15 13. A medical guide wire according to claim 3, wherein the length of said retaining wire is adjusted to 1,000 mm to 2,000 mm.

14. A medical guide wire according to claim 3, wherein the length of said guide wire body is adjusted to 3,500 mm or less.

20 15. An endoscope using a medical guide wire, comprising:

an endoscope body having an appliance passage channel;

a guide wire body to be passed through said channel, the guide wire body serving to guide
25 an appliance to be inserted into the human body in an insertion operation; and

a retaining wire located parallel to said guide

wire body, one end of the retaining wire being connected to the distal end of said guide wire body or a portion near the distal end and the other end extending close to the hand-side end of said guide wire body,

said endoscope body having a wire fixing portion for holding the proximal end portion of said retaining wire.

16. An endoscope according to claim 15, wherein said wire fixing portion is located on an operating section of said endoscope body.

17. A medical guide wire comprising a guide wire body to be passed through a channel of an endoscope, the guide wire body serving to guide an appliance to be inserted into the human body in an insertion operation,

said guide wire body having an aiding portion for releasably fixing the guide wire body to an insert section of said endoscope.

18. A medical guide wire according to claim 17, wherein said guide wire body is provided with an engagement aiding portion on the distal end portion side thereof, adapted releasably to engage a guide wire fixing mechanism on the side of a distal end opening of the channel of said endoscope, thereby aiding engagement with said guide wire fixing mechanism, when the distal end portion of said guide wire body is detachably anchored by means of the guide wire fixing

mechanism.

19. A medical guide wire according to claim 18,
wherein said guide wire body is provided with a fixable
part on the distal end portion side thereof, easily
5 fixable by means of said guide wire fixing mechanism,
said engagement aiding portion being formed of said
fixable part.

20. A medical guide wire according to claim 19,
wherein said fixable part is formed by deforming said
10 guide wire body.

21. A medical guide wire according to claim 19,
wherein said fixable part is formed by preshaping said
guide wire body itself.

22. A medical guide wire according to claim 19,
15 wherein said fixable part is an odd-shaped part
obtained by changing the shape of said guide wire body.

23. A medical guide wire according to claim 22,
wherein said odd-shaped portion is based on a
difference in level created by changing the outside
20 diameter of said guide wire body.

24. A medical guide wire according to claim 22,
wherein said odd-shaped part is based on a difference
in level created by changing the sectional shape of
said guide wire body.

25. A medical guide wire according to claim 19,
wherein said fixable part is a part of said guide wire
body capable of generating high friction.

26. A medical guide wire according to claim 19, wherein said fixable part is a soft part of said guide wire body.

5 27. A medical guide wire according to claim 19, wherein said fixable part is a part of said guide wire body having force of attraction.

28. A medical guide wire according to claim 19, wherein said guide wire body has a marking whereby the position of said fixable part can be identified in the
10 field of view of said endoscope.

29. A medical guide wire according to claim 19, wherein said guide wire body has a marking whereby the position of said fixable part can be identified by means of X-rays.

15 30. A medical guide wire according to claim 18, wherein said guide wire body includes a core and a coating member surrounding the core, the coating member being fixed to said core on the distal end portion side thereof and having at least two slits
20 arranged in the axial direction on the side nearer to the proximal end than the fixed portion.

31. A medical guide wire according to claim 30, wherein those parts of said coating member which are situated between said slits are formed of elastically
25 deformable belt-shaped portions.

32. A medical guide wire according to claim 30, wherein said engagement aiding portion is formed of

those parts of said core and the coating member which are located on the hand side of the guide wire body and have high resistance.

33. A medical guide wire according to claim 30,
5 wherein said coating member is provided with at least two said slits spaced in the axial direction of said guide wire body.

34. A medical guide wire according to claim 18,
10 wherein said engagement aiding portion is formed of a part on the distal end side of said guide wire body varied in outside diameter.

35. A medical guide wire according to claim 34,
15 wherein said engagement aiding portion is formed of a part on the distal end side of said guide wire body having an outside diameter smaller than that of the peripheral part.

36. A medical guide wire according to claim 34,
20 wherein said engagement aiding portion is formed of a part on the distal end side of said guide wire body having an outside diameter larger than that of the peripheral part.

37. A medical guide wire according to claim 34,
25 wherein said engagement aiding portion is formed of a part on the distal end side of said guide wire body having a flat sectional shape.

38. A medical guide wire according to claim 34,
wherein said engagement aiding portion fixes said guide

wire body by changing the outside diameter of the distal end side of said guide wire body and causing the changed portion to engage said guide wire fixing mechanism.

5 39. A medical guide wire according to claim 18, wherein said guide wire body has a rugged portion near the distal end thereof, said engagement aiding portion being formed of said rugged portion.

10 40. A medical guide wire according to claim 39, wherein said rugged portion is formed of pointed spines.

 41. A medical guide wire according to claim 40, wherein said spines are inclined to the hand side.

15 42. A medical guide wire according to claim 18, wherein said guide wire body has a continuous ring-shaped rugged portion near the distal end thereof, said engagement aiding portion being formed of said rugged portion.

20 43. A medical guide wire according to claim 42, wherein said rugged portion has a serrate shape.

 44. A medical guide wire according to claim 18, wherein said engagement aiding portion is formed of a high-friction portion having high frictional resistance.

25 45. A medical guide wire according to claim 44, wherein said engagement aiding portion is a tear-resistant material.

46. A medical guide wire according to claim 18, wherein said engagement aiding portion is formed of a soft member.

5 47. A medical guide wire according to claim 46, wherein said engagement aiding portion is a tear-resistant material.

48. A medical guide wire according to claim 46, wherein said soft member is thicker than the peripheral portion of said guide wire body.

10 49. A medical guide wire according to claim 48, wherein said core corresponding to a thick portion of said soft member is thinner than the peripheral portion.

15 50. A medical guide wire according to claim 18, wherein said engagement aiding portion has a space between the core and the coating member of said guide wire body.

20 51. A medical guide wire according to claim 18, wherein said engagement aiding portion is formed of different materials alternately arranged in the axial direction.

25 52. A medical guide wire according to claim 51, wherein engagement aiding portion includes a plurality of ring-shaped members of a soft material arranged at spaces on a rigid portion.

53. A medical guide wire according to claim 18, wherein said engagement aiding portion includes at

least two resin layers arranged around said core,
whereby a crack, if any, created in said coating member
of said guide wire body by the engagement with said
guide wire fixing mechanism can be prevented from
5 directly reaching said core.